



Operating Instructions

Safety Switches Industrial

> G537/2
> G537/5



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2 General Information

2.1 Manufacturer

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2.2 Information regarding the Operating Instructions

ID NO.: 147913 / 8537602302
Publication Code: S-BA-G537/2/5-01-en-02/02/2009
We reserve the right to make technical changes without notice.

2.3 Symbols Used

▶	Action request: Describes actions to be carried out by the user.
▷	Reaction sign: Describes the results or the reactions to the actions taken.
✗	Bullet
☞	Commentary sign: describes the notes and recommendations.
	Warning sign: Danger from energised parts!

3 General Safety Information

3.1 Safety Instructions for Assembly and Operating Personnel

The operating instructions contain basic safety instructions which are to be observed during installation, operation and maintenance. Non-observance can lead to endangerment of persons, plant and the environment.

WARNING

Risk due to unauthorised work being performed on the device!

- ▷ Risk of injury and damage to equipment.
- ▶ Assembly, installation, commissioning, operation and maintenance must only be performed by personnel who are both authorised and suitably trained for this purpose.

Before assembly/commissioning:

- ▶ Read through the operating instructions.
- ▶ Give adequate training to the assembly and operating personnel.
- ▶ Ensure that the contents of the operating instructions are fully understood by responsible personnel.

When operating the device:

- ▶ Ensure the operating instructions are made available on location at all times.
- ▶ Observe safety instructions.
- ▶ Observe national safety and accident prevention regulations.
- ▶ Only run the device according to its performance data.
- ▶ Servicing/maintenance work or repairs which are not described in the operating instructions must not be performed without prior agreement with the manufacturer.
- ▶ No changes to the device are permitted.
- ▶ Install and use the device only if it is undamaged, dry and clean.

If you have questions:

- ▶ Contact the manufacturer.

3.2 Warnings

Warnings are sub-divided in these operating instructions according to the following scheme:

WARNING

Type and source of the danger!

- ▷ Possible consequences.
- ▶ Measures to avoid danger.

They are always identified by the signalling word “WARNING” and sometimes also have a symbol which is specific to the danger involved.

3.3 Conformity to Standards

The safety switches comply with the following standards and directives:

- ✗ IEC/EN 60947-1, IEC/EN 60947-2, IEC/EN 60947-4, IEC/EN 60947-5-1

4 Designated Use

Safety switches of series G537 ensure that machines are disconnected from electrical power during cleaning and repair work.

The safety switches G537/2 and G537/5 are not approved for use in hazardous areas zones.

WARNING

Only use the device for its intended purpose!

- ▷ Otherwise, the manufacturer's liability and warranty expire.
- ▷ The device may only be used under the operating conditions described in these operating instructions.
- ▷ The device may only be used in hazardous areas according to these operating instructions.

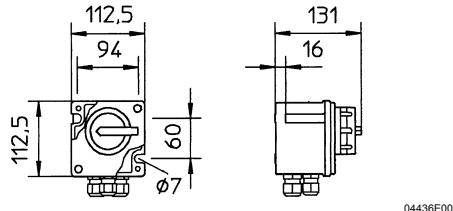
5 Technical Data

Main contacts										
Rated operational voltage	690 V AC (250 A, 125 A, 63 A, 40 A, 25 A, 16 A, 12 A) / 500 V AC (80 A, 160 A)									
Rated operational current	12 A / 16 A; 16 A; 25 A; 40 A; 63 A / 80 A; 125 A / 160 A									
Switching capacity	according to IEC / EN 60947-3; DIN VDE 0660, part 107									
	AC 23	12 A	16 A	25 A	40 A	63 A	80 A	125 A	160 A	
U _e	P	P	P	P	P	P	P	P	P	
230 V ~	2.2 kW	4.0 kW	5.5 kW	11.0 kW	18.5 kW	22.0 kW	37.0 kW	45.0 kW		
400 V ~	4.0 kW	7.5 kW	11.0 kW	18.5 kW	30.0 kW	37.0 kW	55.0 kW	85.0 kW		
500 V ~	5.5 kW	7.5 kW	15.0 kW	22.0 kW	37.5 kW	55.0 kW	75.0 kW	110.0 kW		
690 V ~	7.5 kW	11.0 kW	22.0 kW	37.0 kW	55.0 kW	-	110.0 kW	-		
	AC 3	12 A	16 A	25 A	40 A	63 A	80 A	125 A		
U _e	P	P	P	P	P	P	P	P		
230 V ~	2.2 kW	4.0 kW	5.5 kW	11.0 kW	18.5 kW	22.0 kW	37.0 kW			
400 V ~	4.0 kW	7.5 kW	11.0 kW	18.5 kW	30.0 kW	37.0 kW	55.0 kW			
500 V ~	5.5 kW	7.5 kW	15.0 kW	22.0 kW	37.5 kW	55.0 kW	75.0 kW			
690 V ~	7.5 kW	11.0 kW	22.0 kW	37.0 kW	55.0 kW	55.0 kW	-			
Rated insulation voltage	750 V									
Rated impulse withstand voltage	6 kV									
Service life of electrical / mechanical parts	> 10 ⁵ operations									
Max. short circuit protection	12 / 16 A		16 A	25 A	40 A	63 / 80 A	125 / 160 A	250 A		
	16 A at I _e = 12 A, 690 V AC		50 A	50 A	80 A	100 / 125 A	200 A	315 A		
Terminals	Triggering characteristics: gL / gG acc. to DIN VDE 0636, part 10									
	12 / 16 A	16 A	25 A	40 A		63 / 80 A	125 / 160 A			250 A
	2.5 / 4 mm ²	4 / 6 mm ²	6 / 10 mm ²	16 mm ²	25 mm ²	35 mm ²	95 mm ²	120 mm ²	120 mm ²	
	finely stranded / solid wire	finely stranded / solid wire	finely stranded / solid wire	finely stranded / solid wire	stranded	finely stranded / solid wire	finely stranded / solid wire	stranded	stranded	multi-wire
Auxiliary contacts										
Switch	3 pole: 1 NO (ON delayed - OFF advanced) 6 pole: 2 NO (1 x ON delayed - OFF advanced / 1 x switching normally)									
Rated operating voltage	12 A / 16 A - version: 400 V AC									
	16 A-, 25 A-, 40 A, 63 A / 80 A-, 125 A / 160 A, 250 A -version: 500 V AC									
Rated operational current	12 / 16 A, 250 A - versions 6 A									
	16 A, 25 A, 40 A, 63 / 80 A, 125 / 160 A - versions 10 A									
Terminals	12 / 16 A		16 A	25 A	40 A	63 / 80 A	125 / 160 A	250 A		
	2,5 / 4 mm ²	4 / 6 mm ²	4 / 6 mm ²	4 mm ²	4 mm ²	4 mm ²	4 mm ²	4 mm ²	4 mm ²	
	finely stranded / solid wire	finely stranded / solid wire	finely stranded / solid wire	finely stranded / solid wire	finely stranded / solid wire	finely stranded / solid wire	finely stranded / solid wire	finely stranded / solid wire	finely stranded / solid wire	
Enclosure material	8537/2: Polyester resin, glass fibre reinforced 8537/5: painted sheet steel or stainless steel (1.4404)									

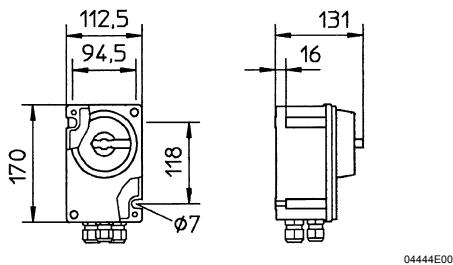
Technical Data

Enclosure cover	In "ON" position removable, in "OFF" position interlocked
Handle	In 0-position 3-times padlockable, Colour: Handle black, protective collar black Special version: Protective handle red, collar yellow
Ingress Protection	IP66 (12 A / 16 A, 16 A, 25 A, 40 A, 63 / 80 A) IP54 (125 / 160 A, 250 A)
Ambient temperature	-20 °C ... + 40 °C -40 °C ≤ Ta ≤ 55 °C

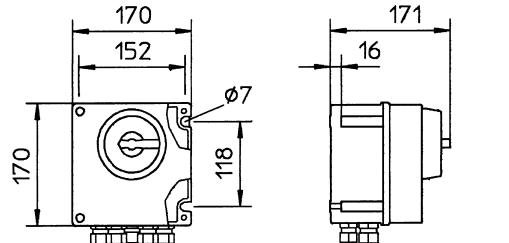
Dimensional drawings (all dimensions in mm) - subject to alterations



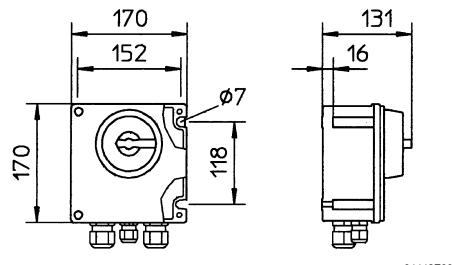
G537/2-701, 12 A / 16 A, 3-pole



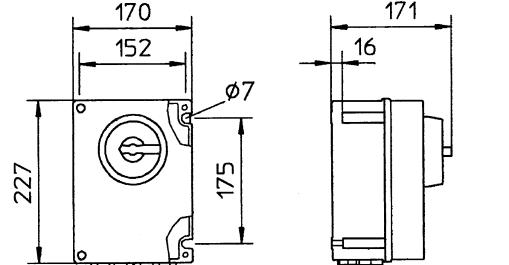
G537/2-702, 16 A, 3-pole



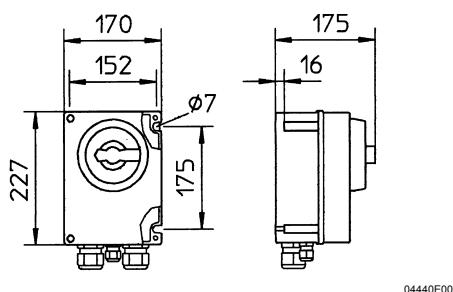
G537/2-802, 16 A, 6-pole



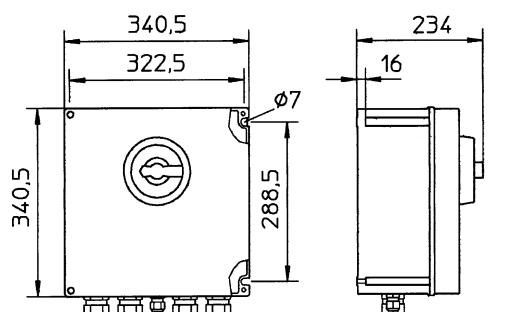
G537/2-703, 25 A, 3-pole



G537/2-803, 25 A, 6-pole

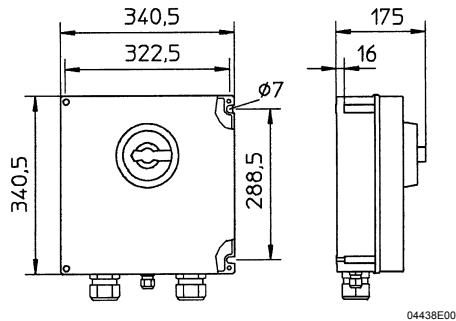


G537/2-705, 40 A, 3-pole

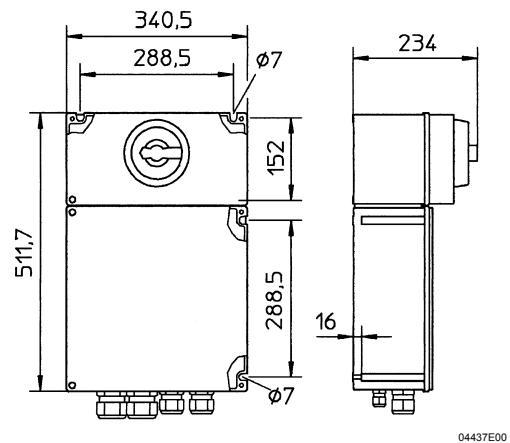


G537/2-805, 40 A, 6-pole

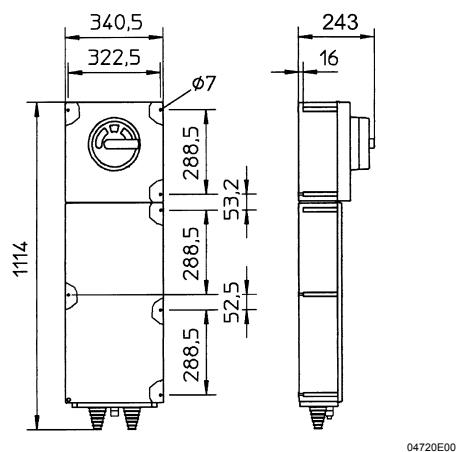
Dimensional drawings (all dimensions in mm) - subject to alterations



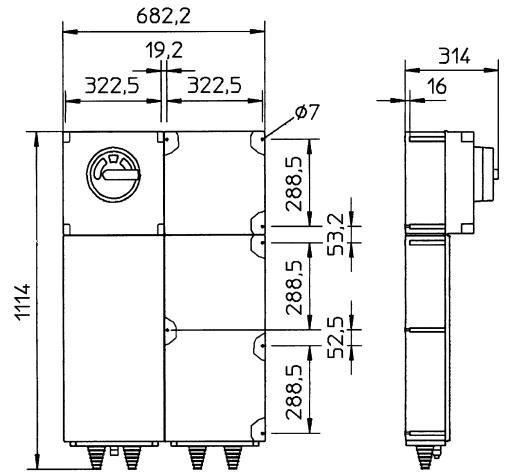
G537/2-706, 63 A / 80 A, 3-pole



G537/2-806, 63 A / 80 A, 6-pole



G537/2-709, 125 A / 160 A, 3-pole



G537/2-809, 125 A / 160 A, 6-pole

6 Transport, Storage and Disposal

Transport

- Shock-free in its original carton, do not drop, handle carefully.

Storage

- Store in a dry place in its original packaging

Disposal

- Ensure environmentally friendly disposal of all components according to legal regulations.

7 Assembly

	Install a protective roof or wall if the explosion-protected electrical device is mounted outdoors.
	Drilling template see dimensional drawing.

8 Installation

8.1 Mains connection

- ▶ Fit the end covering sleeves gas-tight and using a suitable tool.
- ▶ Be especially careful when connecting the cable.
- ▶ The conductor insulation must reach to the terminal.
- ▶ The conductor itself must not be damaged when removing the insulation.
- ▶ Select the cables and the mode of running them in a way that the maximum permitted cable temperature is not exceeded.
- ▶ Always connect the earth lead.
- ▶ Observe the tightening torque of the terminals:

Version	Tightening torques of the terminals
12 A, 16 A, 25 A	1.8 Nm
40 A, 63 A, 80 A	3.8 Nm
125 A, 160 A	10 - 20 Nm

8.2 Back-up fuse

- ▶ Provide suitable back-up fuses, see chapter 5 "Technical Data".

8.3 Back-up fuses for auxiliary circuits

- ▶ As a general rule, auxiliary circuits must be protected by a 10 A gL fuse.

9 Commissioning

Before commissioning

- ▶ Check the cables and lines are clamped properly.
- ▶ Inspect cable glands for damage.
- ▶ Control torques.
- ▶ Ensure that the connection is correctly made.
- ▶ Ensure that all screws and nuts are fully tightened.
- ▶ Ensure that it contains no foreign bodies.

10 Maintenance

⚠ WARNING

Risk due to unauthorised work being performed on the device!

- ▷ Risk of injury and damage to equipment.
- ▶ Mounting, installation, commissioning and servicing work must only be performed by personnel who are both authorised and suitably trained for this purpose.

⚠ WARNING



Danger from energised parts!

- ▷ Risk of severe injuries.
- ▶ All connections and wiring must be disconnected from the power supply.
- ▶ Secure the connections against unauthorised activation.

⚠ WARNING

Short-circuit in the main

- ▷ Contacts may be damaged.

10.1 Regular Maintenance Work

- ▶ Consult the relevant regulations to determine the type and extent of inspections.
- ▶ Plan the intervals so that any defects in the equipment which may be anticipated are promptly detected.

To check as part of the servicing/maintenance schedule:

- ✗ Check that cables and lines are clamped properly.
- ✗ Check that cable entries are tight
- ✗ Check the state of the cable entries
- ✗ Check seals for damage
- ✗ Inspect device for visible damage.
- ✗ Compliance with the permitted temperatures
- ✗ Make sure the device is used according to its designated use
- ✗ Check the interior for humidity and dirt.

10.2 Cleaning

- ✗ Clean with a cloth, brush, vacuum cleaner or similar items.
- ✗ When cleaning with a damp cloth, use water or mild, non-abrasive, non-scratching cleaning agents.
- ✗ Never use aggressive cleaning agents or solvents.

11 Accessories and spare parts

⚠ WARNING

Use only original spare parts as well as original accessories made by R. STAHL Schaltgeräte GmbH.



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